



2834

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:
Yoshinori OJIMA, et al.

Serial Number: 09/633,139

Filed : August 4, 2000

For: GAS TRANSFER MACHINE

Group Art Unit: 2834

7/12/01

Examiner: LAM, T

Commissioner for Patents
Washington, D.C. 20231

July 6, 2001

REQUEST FOR RECONSIDERATION

Dear Sir:

In response to the Office Action dated April 11, 2001, reconsideration of the rejection is respectfully requested.

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REMARKS

Claims 1-5 are pending in this application. Reconsideration of the rejections in view of the following remarks is respectfully requested.

Drawings

The Examiner noted that Figs. 1 and 2 should be labeled "Prior Art."

A Request for Approval of Drawing Changes has been attached hereto with a marked up copy of Figs. 1 and 2 with proposed drawing changes shown in red ink.

If approved, these drawing changes would be incorporated into formal drawings to be filed prior to payment of the issue fee.

Rejections under 35 USC §103(a)

Claims 1 and 4 were rejected under 35 U.S.C. §103(a) as being obvious over Prior Art (figs. 1-2 of the application) in view of Evans et al (U.S. Patent No. 5,663,605).

Claims 2 and 3 were rejected under 35 U.S.C. §103(a) as being obvious over Prior Art in view of Evans et al., and further in view of Trago et al (U.S. Patent No. 6,020,661).

Claim 5 was rejected under 35 U.S.C. §103(a) as being obvious over Prior Art in view of Evans et al., and further in view of Naito et al (U.S. Patent No. 5,929,541).

Applicants respectfully traverse these rejections.

Evans et al discloses an alternator which has the potential to provide improved power output, particularly at low speeds, over other alternative alternator designs, and which is also highly manufacturable, an advantage over many other designs. Although Evans et al alleges that an alternator is one embodiment of the invention, it fails to teach or suggest a reluctance-type motor for rotating a shaft.

Although the Examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness, the Office Action has not established a *prima facie* case of obviousness.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some **suggestion or motivation** either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a **reasonable expectation of success**. Finally the prior art reference (or references when combined) must teach or suggest **all the claim limitations**. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure.

In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

First, there is no suggestion or motivation either in the Prior Art or Evans et al to modify the references or to combine reference teachings. There is no suggestion or motivation in the knowledge generally available to one of ordinary skill in the art, to modify or combine them. The Office Action alleged at page 3 as follows:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the motor structure as taught by prior art and replace the reluctance rotor of Evans et al as disclosed above to take place of the rotor of prior art that would provide a reluctance rotor with improvement of a power output.

However, the improvement in a power output of an alternator in Evans et al has nothing to do with the improvement of a gas transfer machine of the present invention.

Second, there cannot be a reasonable expectation of success in combining the Prior Art or Evans et al. Nothing in Evans et al indicates solutions to strength problem when the rotor rotates at high speed. In fact, Evans et al does not solve the problem accompanying secondary conductors because the rotor has both secondary conductors and permanent magnets.

Finally the Prior Art or Evans et al does not teach or suggest all the claim limitations, especially the recitation of "**a reluctance-type motor for rotating said rotatable shaft** about its own axis, said reluctance-type motor comprising a stator, a motor rotor surrounded by said stator, and a shield member isolating said stator from said motor rotor, **said motor rotor** being directly coupled to said rotatable shaft and **having a plurality of magnetic salient poles.**"

Thus, there is no teaching or suggestion to make the claimed combination and the reasonable expectation of success in the cited references, and the allegation in the Office Action is purely based on Applicants' disclosure. The importance of suggestion is emphasized in the Federal Circuit ruling. See *In re Rouffet*, 47 USPQ2d 1453 (Fed. Cir. 1998) (ruling that the suggestion to combine requirement stands as a critical safeguard against hindsight analysis and rote application of the legal test for obviousness).

Thus, it is clear that a *prima facie* case has not be established.

According to the present invention, because the reluctance-type motor has no secondary conductors and end rings on the motor rotor, the motor rotor has increased mechanical strength

enduring high speed rotation and increased efficiency with less current loss. Also, because the stator can concentrate the windings on salient poles for minimizing coil ends, the size of the motor can be reduced. Thus, a gas transfer machine can operate stably even when a corrosive gas is handled. Also, it can operate at a high speed.

For at least these reasons, claim 1 patentably distinguishes over the cited references.

Trago et al is cited for disclosing a mold body of a synthetic resin and the stator being embedded in the resin, and Naito et al is cited for disclosing permalloy material for making a rotor. These references do not remedy the deficiencies of Prior Art or Evans et al.

Therefore, claims 2-5, depending from claim 1, also patentably distinguish over the cited references.

Thus, the 35 USC §103(a) rejections should be withdrawn.

It is submitted that nothing in the cited references, taken either alone or in combination, teaches or suggests all the features recited in each claim of the present application. Thus, all pending claims are in condition for allowance. Reconsideration of the rejections, withdrawal of the rejections and an early issue of a Notice of Allowance are earnestly solicited.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicant's undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. The fees for such an extension or any other fees which may be due with respect to this paper, may be charged to Deposit Account No. 01-2340.

Respectfully submitted,

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